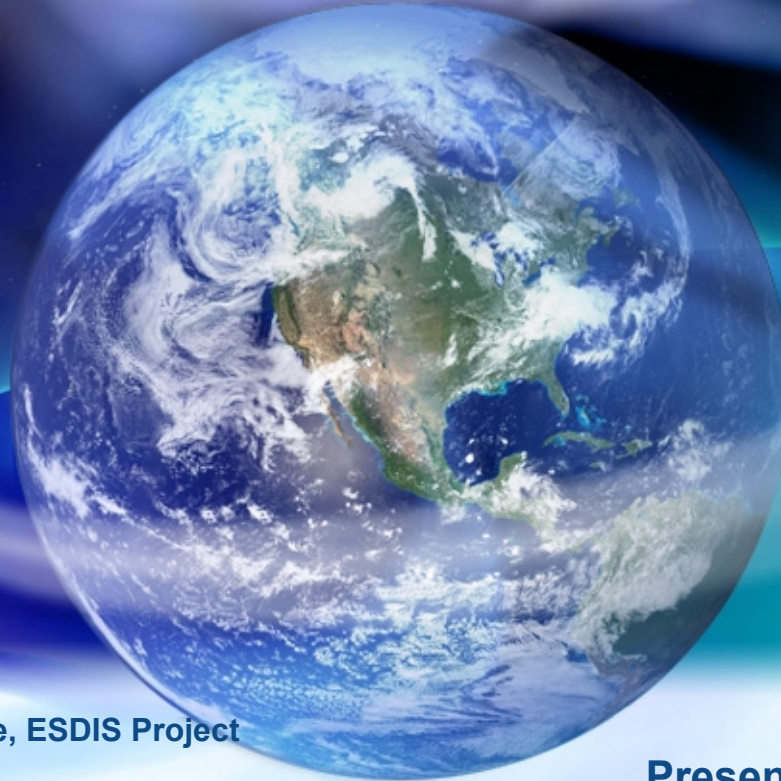


EOSDIS Users and Usage (extract) –

What We Know About Our Users



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Presentation to ESISS
Scripps Institute
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Extracted SWGD Workshop Presentation

- The original ESISS presentation included the following topics:
 - What User Statistics Tell Us
 - What We Know from User Feedback
 - Feedback From the SWGD Workshop
 - Conclusions and Next Steps
- Only the SWGD workshop topic is included in this presentation



Beyond the Statistics: SWGD User Workshop

- A workshop on EOSDIS Data Accessibility and Usability was held on November 5-6, 2003.
- Sponsored by the EOS Science Working Group on Data, led by Robert Wolfe.
- The workshop was attended by over 100 researchers and data system developers/operators
- Four panels of invited users who represented:
 - Climate Modelers - Jim Collatz (chair)
 - Earth Science Researchers - Tom Schmugge (chair)
 - Applications and Operations Users - Roger King (chair)
 - Education and Outreach Users - Glen Schuster (chair)
- The panelists described their objectives, the type of EOS data they used, how they got the data and how usable they found the data, any barriers users encountered, how the barriers were overcome.
- Break out sessions were held to allow the workshop participants to discuss access and usability of EOSDIS data by their community and to make suggestions for improvements.



Workshop Findings

- Users appreciated both the services already being provided and the improvements that took place over the last few years: data being staged more quickly, the addition of on-line access to selected datasets through the data pools, improvements in the user interface (EDG)
- Better communication with the user community would help improve the usability of EOS data.
- EOS standard data products are primarily oriented toward the Earth science researcher community and need some customization before they can become useful to other user groups
- The on-line data pools were praised as a good data distribution method.
- The difficulty of co-locating and inter-comparing datasets from different instruments and sometimes across disciplines is a barrier to the use of the data.
- Making EOS data sets visible to web search engines (e.g., Google) has the potential to increase the usage of EOS data
- Data persistence is a key concern particularly for the education community.



Barriers to Full Use by Operational Community

- Long lead time between launch and providing the operational community with data products
- Continuity of data.
- Consistency in data quality (i.e., cross-calibration, validation of products).
- Timeliness of data delivery (this is going to be application dependent, but one operational user recommended delivery of land products in the same time frame as weather products).
- Data formats that are compatible with the operational community needs (e.g., GIS)
- Insufficient coordination among instrument teams to enable easier data fusion



Key Workshop Recommendations (page 1)

■ (Common) Services and Tools

- Better advertise available tools that help make EOS data more usable
- Develop portals tailored to specific user communities.
- Simplify EDG by reducing the number of “clicks” required to order data
- Provide more comprehensive subsetting implementation, including “power spatial subsetting” across an entire data set
- Develop services and tools that enable easier data fusion across instruments and missions
- Provide storage for selected custom (massaged) data sets
- Provide services and tools to make EOS-HDF data available in alternative formats such as GeoTIFF, NetCDF, and JPEG
- Provide script based access to the data that allows users to automatically search and retrieve data
- A long-term goal should be to provide a semantic interface for searching for data



Key Workshop Recommendations (page 2)

- (Common) Communication with User Community
 - Make more effective use of email lists and bulletin boards to notify users about the availability of data and to allow users within the communities to communicate with each other.
 - Develop a process to allow community input regarding the relative priority of extremely large orders, perhaps through peer review
 - Hold additional workshops focused on specific user communities
 - Involve each user community throughout the process of developing future ESE products
 - Work with other organizations such as the Federation to help service specific user communities
- (Climate Model panel) Make data sets available at different spatial resolutions, starting with the resolution of the instrument up to coarser resolutions (up to 0.25 degree or more) for global research
- (Applications panel) Make calibration and science algorithms freely available to the direct broadcast community as soon as possible after launch to help operational users to quickly build the capability to use the data operationally



Key Workshop Recommendations (page 3)

- (Applications panel) Better bottom-up coordination between providers of data and operational community
 - Involve operational users earlier and more closely (i.e., instrument development, product design, and product generation)
- (Applications panel) Develop systems and tools that permit image information mining
- (Educator panel) Provide simple-to-use “current” mission data in formats that can be read simply by browsers (JPEG, GIF, etc.) and widely-used commercial products. Persistency and consistency are paramount
- (Educator panel) Provide large higher-resolution data “static” scenes for particular parameters, from which spatial and temporal samples could be extracted and studied
- (Educator panel) Continue development of the highly regarded data pools initiative and the generation of GeoTIFF file formats
- (Educator panel) Make all data Google discoverable. Flat map files with human readable descriptions are essential.



Recommended Next Steps

- Hold regular (yearly) community specific workshops and include all providers (not only NASA ESDIS)
 - Outside of SWGD scope
- Assess implementation of recommendations
 - Develop metrics based on recommendations
 - Poll panelists and users
- Report findings and recommendations to ESDIS and NASA HQ
 - Report complete
- Publish article on workshop in Earth Observer
 - Underway